

Pilot Poppet Type Body Ported/Single Unit **Series VP300/500/700**

Low power consumption 1.5 W (DC)
Possible to use as either a selector or divider valve
Possible to change from N.C. to N.O.



• Refer to back page 6 for changing the type of actuation.

Possible to use in vacuum applications

Up to -100 kPa



Series VP300



Series VP500



Series VP700

External Pilot

Use external pilot type in the following cases:

- For vacuum or for low pressure 0.2 MPa or less
- Please consult with SMC for use in a vacuum hold application.
- When having P port downsized in diameter
- When using A port as the atmospheric releasing port, e.g. air blower



Made to Order
(Refer to page 24 for details.)

X500	Pilot exhaust port with piping thread (M3) specification
X505	Interchangeable specification with the previous valve mounting hole pitch type

Specifications

Fluid		Air
Type of actuation		N.C. or N.O. (Convertible)
Internal pilot	Standard	0.2 to 0.7
	High-pressure type	0.2 to 1.0
External pilot	Standard	-100 kPa to 0.7
	High-pressure type	-100 kPa to 1.0
	Pilot pressure range	Same as operating pressure (Min. 0.2 MPa)
Ambient and fluid temperature (°C)		-10 to 50 (No freezing)
Max. operating frequency (Hz)		5
Manual override		Non-locking push type Push-turn locking slotted type Push-turn locking lever type
Pilot exhaust type		Individual exhaust
Lubrication		Not required
Mounting orientation		Unrestricted
Impact/Vibration resistance (m/s²) (Note)		300/50
Enclosure		Dust-tight (IP65 for D, Y, T)

Note) Impact resistance: No malfunction occurred when it is tested in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition. (Values at the initial period)

Vibration resistance: No malfunction occurred in a one-sweep test between 45 and 2000 Hz. Test was performed at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature. (Values at the initial period)

Solenoid Specifications

Electrical entry		Grommet (G), (H) L-type plug connector (L) M-type plug connector (M)		DIN terminal (D) DIN (EN175301-803) terminal (Y) Conduit terminal (T)	
		G, H, L, M		D, Y, T	
Coil rated voltage (V)	DC		24, 12		
	AC (50/60 Hz)		24, 100, 110, 200, 220, 240		
Allowable voltage fluctuation			±10% of rated voltage*		
Power consumption (W)	DC	Standard	1.5 (With light: 1.55)	1.5 (With light: 1.75)	
		With power saving circuit	0.55 (With light only)	0.75 (With light only)	
Apparent power (VA)*	AC	24 V	1.5 (With light: 1.55)	1.5 (With light: 1.75)	
		100 V	1.55 (With light: 1.65)	1.55 (With light: 1.7)	
		110 V			
		[115 V]			
		200 V			
		220 V			
		[230 V]			
		240 V			
Surge voltage suppressor			Diode (Non-polar type: Varistor)		
Indicator light			LED (Neon bulb is used for AC mode of D, Y, T.)		

* It is in common between 110 VAC and 115 VAC, and between 220 VAC and 230 VAC.

* Allowable voltage fluctuation is -15% to +5% of the rated voltage for 115 VAC or 230 VAC.

* Since voltage drops due to the internal circuit in S, Z, T types (with power saving circuit), the allowable voltage fluctuation should be within the following range.

24 VDC: -7% to +10%

12 VDC: -4% to +10%

Response Time

Model	Pressure specifications	Response time ms (at 0.5 MPa)			
		Without light/surge voltage suppressor	With light/surge voltage suppressor		AC
			S, Z type	R, U type	
VP342	Standard (0.2 to 0.7)	13 or less	38 or less	16 or less	38 or less
	High-pressure type (0.2 to 1.0)	17 or less	42 or less	20 or less	42 or less
VP542	Standard (0.2 to 0.7)	14 or less	39 or less	17 or less	39 or less
	High-pressure type (0.2 to 1.0)	18 or less	43 or less	21 or less	43 or less
VP742	Standard (0.2 to 0.7)	19 or less	44 or less	22 or less	44 or less
	High-pressure type (0.2 to 1.0)	22 or less	47 or less	25 or less	47 or less

Note) Based on dynamic performance test, JIS B 8374-1981. (Coil temperature: 20°C, at rated voltage)